

**Meeting of the Central Valley Flood Protection Board  
August 26, 2010**

**Staff Report  
California Department of Transportation  
Mariposa Creek Bridge**

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**1.0 – ITEM**

Consider approval of Permit No. 18600 (Attachment B).

**2.0 – APPLICANT**

California Department of Transportation, District 10, Fresno

**3.0 – LOCATION**

The project is located in south of the City of Merced along State Route 99 (Mariposa Creek, Merced County, see Attachment A).

**4.0 – DESCRIPTION**

To remove a portion of existing bridge (82 feet wide by 76 feet long); to construct two new bridges, north and southbound, each 60 feet wide by 76 feet long, each supported by 12 concrete piles, 16 inches in diameter, and frontage road bridge, 40 feet wide by 76 feet long, supported by 9 concrete piles, 16 inches in diameter, across Mariposa Creek.

**5.0 – PROJECT ANALYSIS**

The applicant is proposing to build three new structures on new alignments and two of them will be on State Route (SR) 99 alignment and the third bridge will be on the new frontage road alignment (FR-3) east of the new northbound lanes. The existing southbound lane will become the other frontage road west of the new southbound lanes and the existing northbound lane will be removed. The existing bridge is continuous 5-span CIP/RC slab on RC10 and 12-column bents with cantilever end spans. The bridge was originally built in 1938 and later widened in 1987.

The three new proposed bridges will be located at the east of the existing bridge crossing an unnamed drainage ditch south of Duck Slough. The length of the new SR 99 bridge will be 76 feet and the width will be 60 feet for both northbound and

southbound side. The length of the FR-3 bridge will be 76 feet and the width will be 40 feet.

### **5.1 – Hydraulic Analysis**

Mariposa Creek is not a well-defined natural watercourse and the overflow water terminates in percolation basins. Mariposa Creek appears to channel roadway runoff and local flow from immediately adjacent orchard (102 acres) as well as possibly acts as an overflow for Duck Slough. The project location is an orchard and thus there is no slough or canal. There is no work proposed in the creek or slough.

The hydraulic report by California Department of Transportation dated January 2008, shows that the hydraulic model simulation was not performed with a HEC-RAS model because there is no actual flow to get the longitudinal profile and velocity for this bridge. This project has negligible hydraulic impacts associated with the above construction. Field inspections of existing bridge (built in 1938) showed no sign of scour problems.

### **5.2 – Geotechnical Analysis**

This project has no significant geotechnical impacts to the existing streambank or the floodway because there is no work in the creek or slough. Excavation occurs at locations that are not critical to the integrity of the natural stream bank or creek. All fill, excavation, and temporary structures will be completed in compliance with Permit No. 18600 (see Attachment B) and Title 23.

### **5.3 – Additional Staff Analysis**

The existing southbound lanes will become the other frontage road west of the new southbound lanes. There would be no vegetation planning for this bridge project.

## **6.0 – AGENCY COMMENTS AND ENDORSEMENTS**

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- A 208.10 letter from the U.S. Army Corps of Engineers (USACE) is not required because the project is located in the regulated stream with no project levee or other project flood control facilities at or near the site.

## **7.0 – CEQA ANALYSIS**

The Board, acting as a responsible agency under CEQA, has independently reviewed the Environmental Assessment/Environmental Impact Report (EA/EIR, November, 2005), Environmental Assessment with Finding of No Significant Impact/Final Environmental Impact Report (EA/FONSI/FEIR, March 2006), Statement of Overriding

Considerations, and the Notice of Determination (July 5, 2006, SCH No. 2003051094) for the Plainsburg/Arborleda Freeway Project prepared by the lead agency, Caltrans District 10. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvpfb.ca.gov/meetings/2010/8-26-2010agenda.cfm> under a link for this agenda item.

The following are the significant impacts and the mitigation measures to reduce them to less than significant:

- **Aesthetics and Visual Resources:** The project proponent will implement replacement plantings to mitigate for the possible loss of a large oak and large eucalyptus trees.
- **Land Use and Socioeconomics:** The project proponent will provide relocation assistance and real property acquisition policies to mitigate for the displacement of residences and businesses.
- **Hydrology and Water Quality:** Implement construction-related and permanent post-construction Best Management Practices. Additionally, Best Management Practices (BMPs), as described in the Storm Water Pollution Prevention Plan (SWPPP), will be implemented, as appropriate, to retain, treat, and dispose of storm water runoff.
- **Biological Resources:** The project proponent will participate in Waters of the United States compensation and construction monitoring for mitigate for impacts to the jurisdictional Waters of the United States. To mitigate for the impacts to Sensitive species habitat, the project proponent will participate in special-status species habitat compensation, pre-construction surveys, pre-construction educational meetings, avoidance and minimization measures, and construction contract special provisions in accordance with the Biological Opinion issued by the U.S. Fish and Wildlife Service.
- **Air Quality:** Fugitive dust and emissions during construction will be controlled with best available measures so that the amount of such dust and emissions are reduced, as required by San Joaquin Valley Unified Air Pollution Control District's rules, ordinances, and regulations.
- **Cultural Resources:** Work shall be stopped in affected areas if cultural resources are discovered during project construction and appropriate measures will be implemented. The lead agency will consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist and/or paleontologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional

standards and CEQA Guidelines, Section 15064.5. To mitigate for impacts to known archaeological site, the project proponent will fence environmentally sensitive areas and provide construction monitoring.

- **Hazards and Hazardous Materials:** To mitigate for known potential hazardous waste materials, the project proponent will dispose of the soil at a Class I landfill, clean-up site in accordance with Environmental Protection Agency regulations.

Based on its independent review of the EA/EIR, EA/FONSI/FEIR, Mitigation Monitoring Plan and the Notice of Determination, the Board finds that for each of the significant impacts described above, changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EA/FONSI/FEIR. Moreover, such changes or alterations are within the responsibility and jurisdiction of another public agency, Caltrans District 10, and such changes have been adopted by that agency.

## **7.2– Significant Unavoidable Adverse Impacts of the Project**

- The proposed project would be built primarily on farmland that surrounds the project area. 342 hectares (835.2 acres) of farmland of which 101.2 hectares (250 acres) would be acquired.
- The proposed project would cause an increase in noise to sensitive receptors. One receptor would experience a 15-decibel increase in noise.

The Board further finds that none of the significant unavoidable adverse impacts of the project are within the Board's jurisdiction. The Board also finds that the specific economic, legal, social, technological or other benefits of the project, as listed above, outweigh the unavoidable adverse environmental effects, which are thus considered to be "acceptable."

## **7.3 – Statement of Overriding Considerations**

The Board has independently considered the significant and unavoidable environmental impacts of the proposed project. The Board has also considered the benefits of the project, including improving the safety and traffic operations of State Route 99. The proposed project would increase safety for the traveling public, correct roadway deficiencies, accommodate increased traffic demands (both present and future), and provide route continuity. By increasing State Route 99 from four lanes to six and limiting access to two new interchanges, this section of State Route 99 would see a decrease in congestion, a reduced number of accidents involving cross-median traffic and at-grade intersections, improved compatibility of truck and car traffic, and improved efficiency for emergency vehicles. The reduction of traffic congestion, improved traffic flow and circulation of State Route 99, and overall improvement to traffic safety provided by the

project, outweighs the unavoidable impacts identified in the findings. The Board finds that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable adverse environmental effects of the project, and the adverse environmental effects are considered acceptable when these benefits of the project are considered.

The documents and other materials which constitute the record of the Central Valley Flood Board's proceedings in this matter are in the custody of Jay Punia, Executive Officer, Central Valley Flood Protection Board, 3310 El Camino Ave., Rm. 151, Sacramento, California 95821.

## **8.0 – SECTION 8610.5 CONSIDERATIONS**

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

This project has no negative impacts on the State Plan of Flood Control. Both hydraulic and structural impacts from the project construction are negligible.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

Climate change issues have not been taken into account in the hydraulic analysis for this project and the water surface elevation change resulted from change in climate for the site is unknown. There are no other foreseeable projected future events that would impact this project.

## **9.0 – STAFF RECOMMENDATION**

Staff recommends that the Board adopt the CEQA findings, approve the permit, and direct staff to file a Notice of Determination with the State Clearinghouse.

### **10.0 – LIST OF ATTACHMENTS**

- A. Location Maps and Photos
- B. Draft Permit No. 18600
- C. Mariposa Creek Bridge Foundation Plan & General Plan

Design Review:

Sungho Lee

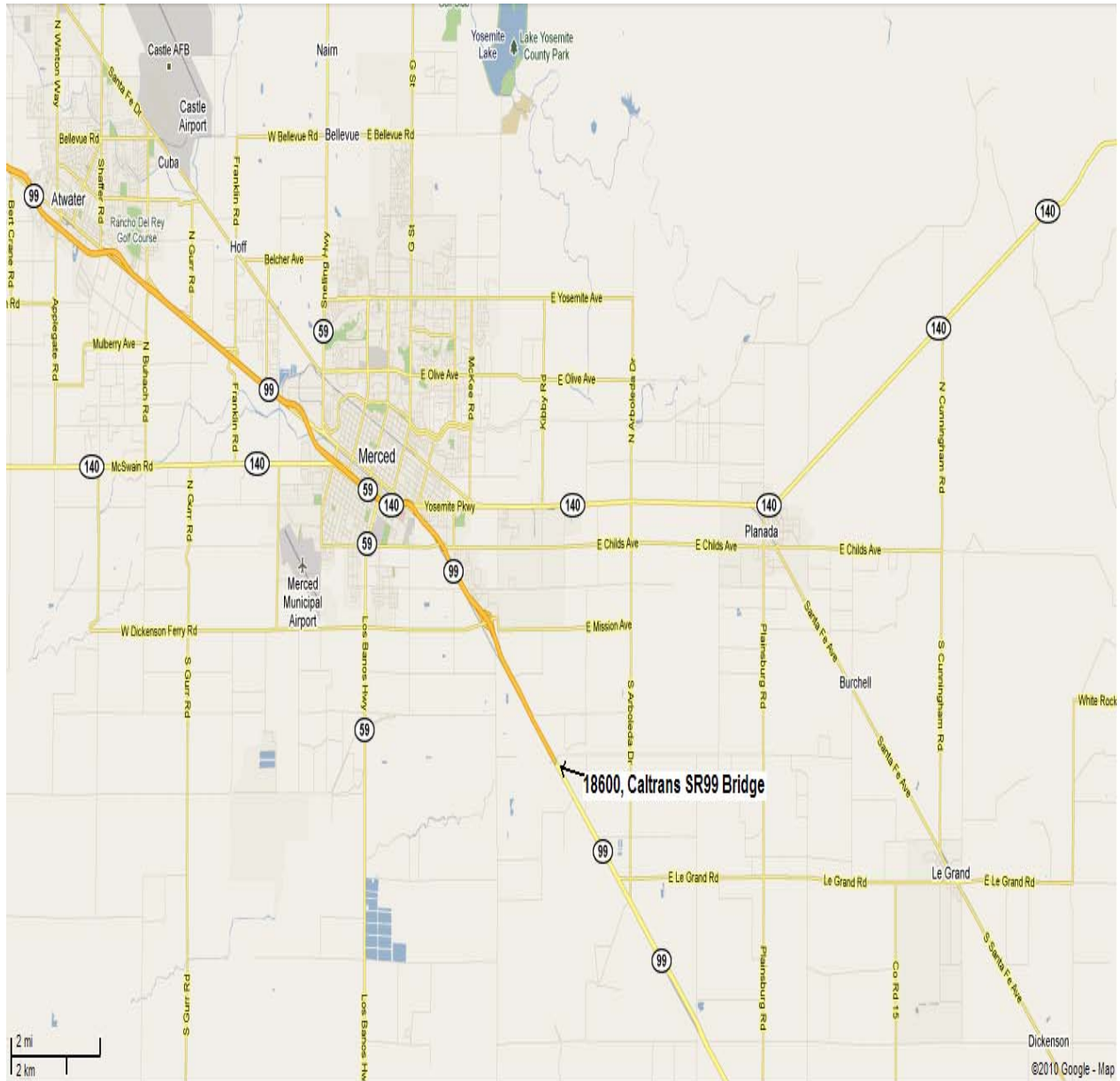
Environmental Review:

Andrea Mauro

Document Review:

David Williams, Dan Fua and Len Marino

## Vicinity Map





Project Location Map





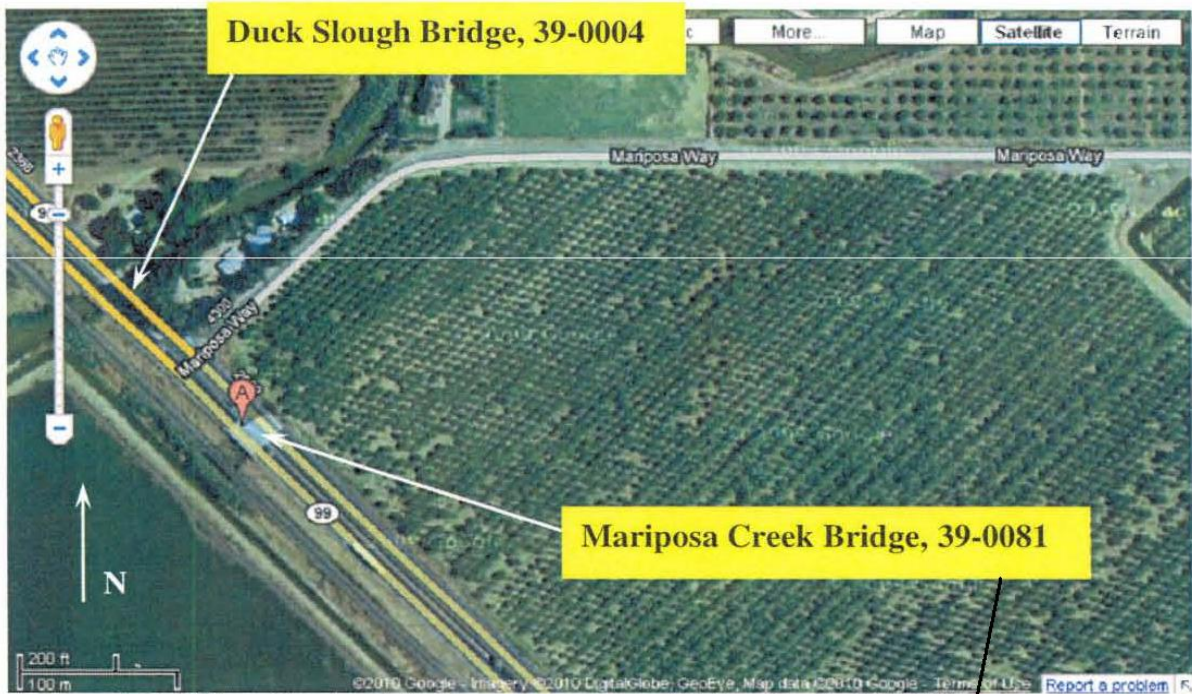
Mariposa Creek Bridge-Looking east



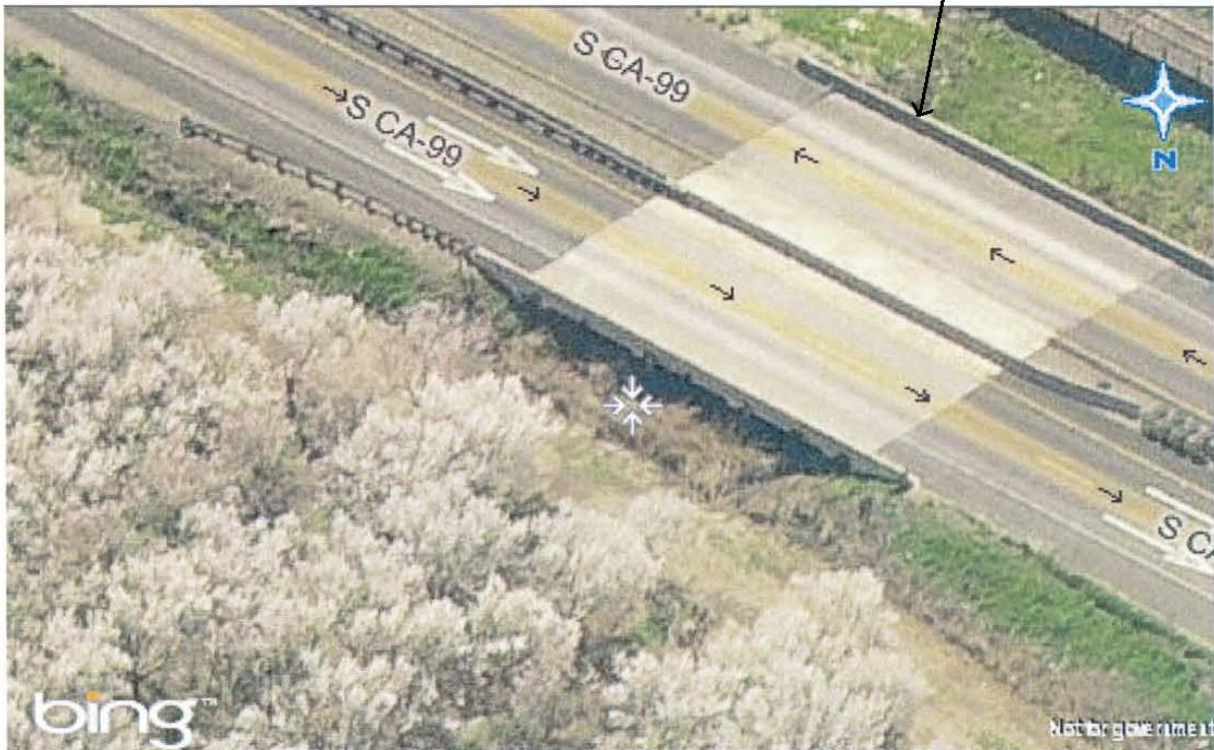
Mariposa Creek Bridge-Looking south



Mariposa Creek Bridge Aerial View



Aerial View. Note no defined stream upstream of Bridge Number 39-0081.



Mariposa Creek, 39-0081. Looking South at upstream edge of deck.

**DRAFT**

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
**THE CENTRAL VALLEY FLOOD PROTECTION BOARD**

**PERMIT NO. 18600 BD**

**This Permit is issued to:**

California Department of Transportation  
2015 East Shields Avenue, Suite 100  
Fresno, California 93726

To remove a portion of existing bridge (82-feet-wide by 76-feet-long); to construct two new bridges, north and southbound, each 60-feet-wide by 76-feet-long, each supported by 12 concrete piles, 16-inches-in-diameter, and a frontage road bridge, 40-feet-wide by 76-feet-long, supported by 9 concrete piles, 16-inches-in-diameter, across Mariposa Creek. The project is located south of the City of Merced along Highway 99 (Section 11, T8S, R14E, MDB&M, Mariposa Creek, Merced County).

**NOTE:** Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

**(SEAL)**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Executive Officer

**GENERAL CONDITIONS:**

**ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

**TWO:** Only work described in the subject application is authorized hereby.

**THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

**FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

**FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection



Board.

**SIX:** This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

**SEVEN:** It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

**EIGHT:** This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

**NINE:** The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

**TEN:** The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

**ELEVEN:** The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

**TWELVE:** Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

#### **SPECIAL CONDITIONS FOR PERMIT NO. 18600 BD**

**THIRTEEN:** All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

**FOURTEEN:** The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

**FIFTEEN:** The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

**SIXTEEN:** The Central Valley Flood Protection Board and Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

**SEVENTEEN:** The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

**EIGHTEEN:** The permittee shall be responsible for repair of any damages to the Mariposa Creek and other flood control facilities due to construction, operation, or maintenance of the proposed project.

NINETEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion

TWENTY: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-ONE: The permittee shall provide supervision and inspection services acceptable to the Central Valley Flood Protection Board. A professional engineer registered in the State of California shall certify that all work was inspected and performed in accordance with submitted drawings, specifications, and permit conditions.

TWENTY-TWO: Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite LL30, Sacramento, California 95821.

TWENTY-THREE: There shall be no plantings within the project area under this permit, except that of native grasses, which may be required for slope protection.

TWENTY-FOUR: If the permitted encroachments result in an adverse hydraulic impact, the permittee shall provide appropriate mitigation measures, to be approved by the Central Valley Flood Protection Board, prior to implementation of mitigation measures.

TWENTY-FIVE: All cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-SIX: The new bridge shall have at least the same waterway area and vertical clearance as the replaced bridge.

TWENTY-SEVEN: The soffit of the bridge shall be no lower than that of the replaced bridge.

TWENTY-EIGHT: The abandoned or dismantled bridge shall be completely removed and disposed of outside the limits of the levee section and floodway.

TWENTY-NINE: The work area shall be restored to the condition that existed prior to start of work.

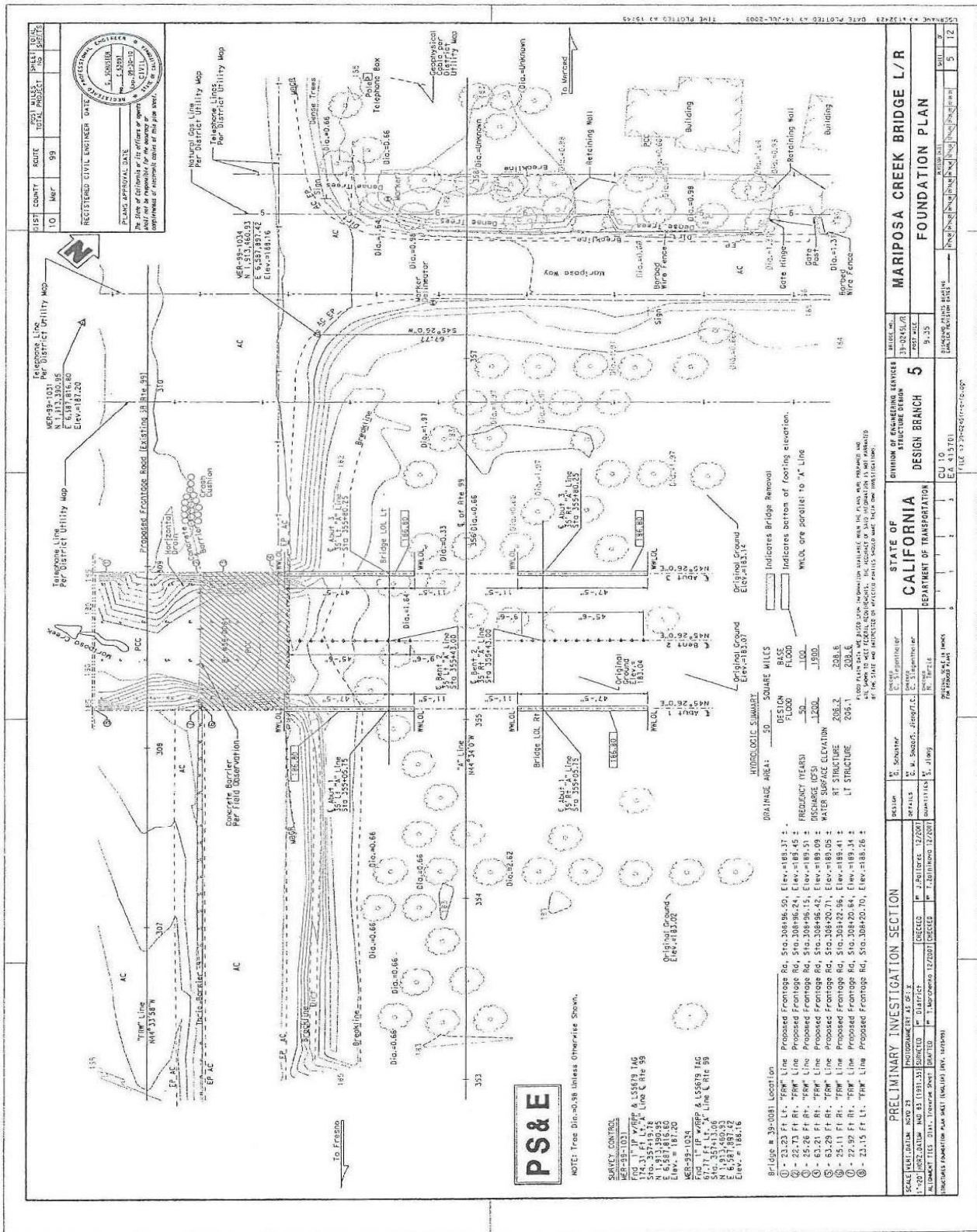
THIRTY: Trees, brush, sediment, and other debris shall be kept cleared from the bridge site and disposed of outside the floodway to maintain the design flow capacity and flowage area.

THIRTY-ONE: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe

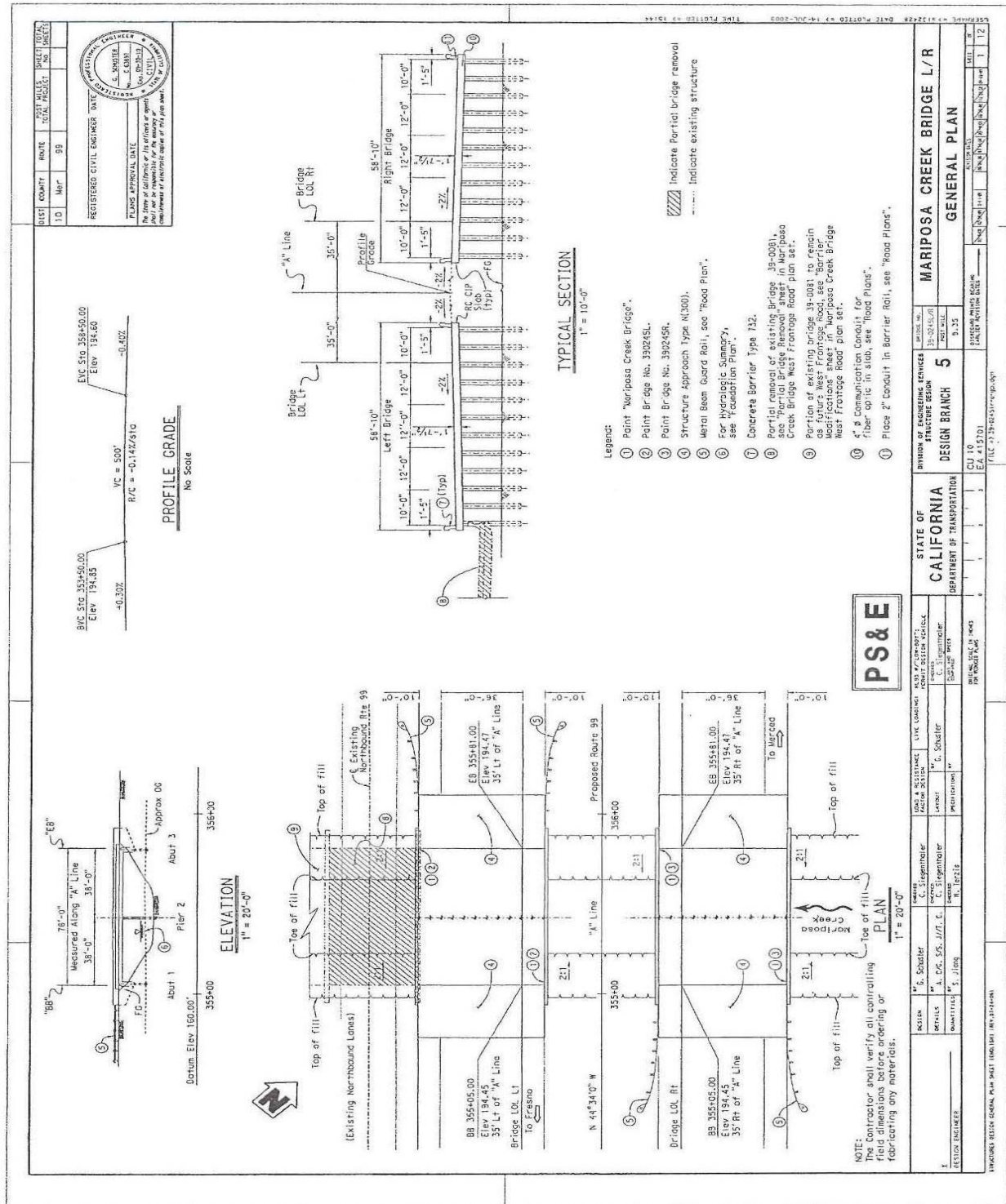
and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.



# Mariposa Creek Bridge Foundation Plan

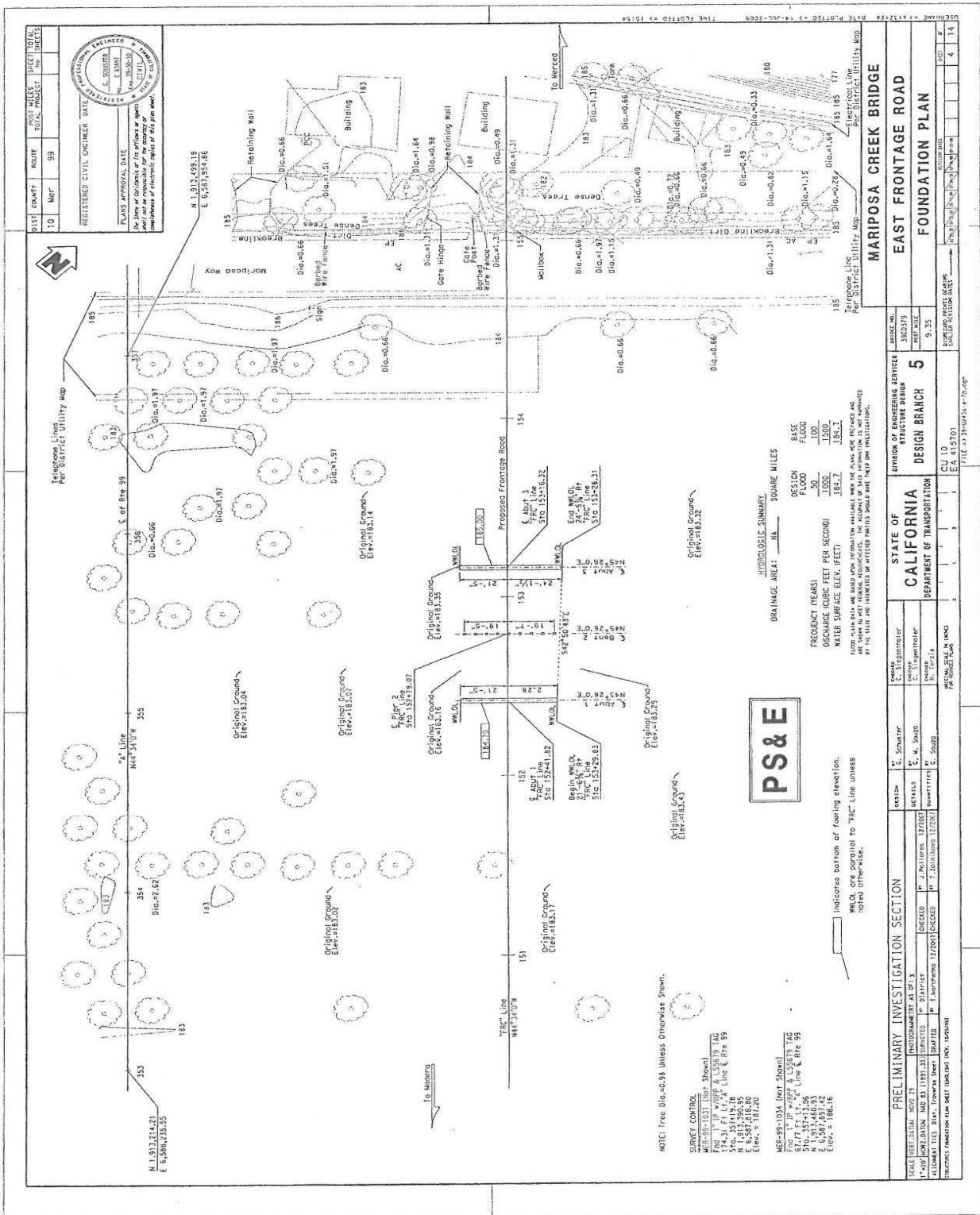


# Mariposa Creek Bridge General Plan





# Mariposa Creek Bridge East Frontage Road Foundation Plan



# Mariposa Creek Bridge East Frontage Road General Plan

